

Application Number 10/565042
Response to the Advisory Action dated November 20, 2008

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

Claims 20 and 21 have been added. Support for these additions can be found in the specification on page 11, lines 12-15 and on page 12 lines 15-29. No new matter has been added.

Claims 4-8 have been rejected under 35 U.S.C. 112, first paragraph, as not complying with the written description requirement. Applicants respectfully traverse this rejection.

The Advisory Action contended that the claimed range encompasses a residual rate of 100%, which allegedly is outside the original description. Even if this is correct, which Applicants are not conceding, the claimed invention does not **require** 100%; it merely establishes a minimum residual rate of 78%. Thus, the present claims are no different from the original claims in being generic to the high residual rates. The minimum residual rate of 78% finds clear support in the properties for Example A2 reported in Table 1 of the specification. Further support for the range is found in the significantly higher residual rate reported for Example A1.

Claims 4-8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera et al. (U.S. Patent No. 4,014,091) in view of Felix et al. (U.S. Patent No. 5,589,558). Applicants respectfully traverse this rejection.

Kodera discloses a method to manufacture an electret transducer using a polytetrafluoroethylene (PTFE) film firmly attached to the backplate by air pressure against the backplate heated at 280-400 °C (see coln. 1, lines 47-54). Functions of the electret may be deteriorated when treated at a temperature higher than 260 °C (see page 1, lines 27-30 of the specification). For example, as shown in examples and comparative examples in table 1, the residual rate is deteriorated when treated at 300 °C compared with the residual rate treated at 270 °C (see table 1 at page 11 of the specification). However, Kodera fails to address the issue of deterioration of charge retention ability of

Application Number 10/565042
Response to the Advisory Action dated November 20, 2008

the electret, and thus cannot suggest a method to improve the residual rate of the electret by using the modified PTFE as claim 4 requires.

Felix discloses that modified PTFE provides improved mechanical properties such as mechanical strength and discoloration (see coln. 3, line 38 – coln. 4, line 15). Felix, however, fails to address the issue of deterioration of charge retention ability of the electret, i.e., the residual rate, and use modified PTFE for improving the residual rate. The residual rate varies depending on the thickness of the modified PTFE, a type of metal, and a type of polymer (see table 1 at page 11 of the specification).

Since neither reference provides any teaching of how to achieve an improved residual rate, there could have been no reasonable expectation that such properties could be achieved even if the reference disclosures were combined. Therefore, the improved properties of the presently claimed invention are adequate to rebut any prima facie case of obviousness that has been established. The rejection's reliance on the properties being inherent is improper in the present case, where the rejection is for obviousness based a combination of reference rather than anticipation based on a single reference.

Accordingly, claim 4 is distinguished from Kodera in view of Felix, and this rejection should be withdrawn.

Claims 9-19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera et al. Kodera et al. (U.S. Patent No. 4,014,091) in view of Kang et al. (U.S. Patent No. 6,334,926). Applicants respectfully traverse this rejection.

As discussed above, Kodera discloses a method to manufacture an electret transducer using a polytetrafluoroethylene (PTFE) film (see coln. 1, lines 47-54) but fails to address the issue of surface treatment of the PTFE film or a water contact angle of the surface of the film and accordingly, fails to disclose the particular water contact angles of surfaces of the film, one of which faces a metal member and the other does not, as claim 9 requires.

Kang discloses a method of treating fluoropolymer surfaces attached to a copper plate (see abstract). Kang, however, fails to address the issue of the water contact angle of the surface of the film as claim 9 requires.

Application Number 10/565042
Response to the Advisory Action dated November 20, 2008

As discussed above, Koderia does not disclose the surface treatment of the PTFE film. A method of the surface treatment Kang discloses uses charge transfer between the grafted functional chains of polymers and the metal to improve adhesion between the film and the metal (see coln. 3, lines 41-48). Thus, there is no reasonable basis to combine Koderia with Kang to try to improve the electric properties of an electret. Thus, claim 14 is distinguished from Koderia in view of Kang.

Accordingly, this rejection should be withdrawn.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

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